Before the
Federal Communications Commission
Washington, DC 20554

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| In the Matter of | ) | |
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| Spectrum Needs of | ) | |
| First Response Providers | ) | WT Docket No. 05-157 |
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# COMMENTS OF
# THE FIRST RESPONSE COALITION

April 28, 2005

The First Response Coalition (FRC) welcomes the opportunity to comment on the critical spectrum needs of America's emergency response providers. The FRC is a not for profit 501(c) (3), organized to educate the public on the needs of our first responders. We are dedicated to pursuing effective public policies that will resolve the urgent public safety issues concerning spectrum allocation and nationwide communications interoperability. Our goal is that the nation's police, fire, and emergency medical service (EMS) personnel possess the tools, equipment, and training necessary to serve and protect our communities.

In this important proceeding, the FRC offers comments on the following topics:

1.) First Responders and Spectrum
2.) The Communications Interoperability Crisis
3.) Additional Spectrum is Crucial to Achieving Interoperability
4.) The Commission Should Urge Congress to Provide Resources for First Responders

## 1.) FIRST RESPONDERS AND SPECTRUM

In its upcoming report to Congress, the Federal Communications Commission (the Commission) must stress the need for further dedicated spectrum to address both the short and long term needs of first responders, and support efforts to improve the efficient use of both spectrum and technology. Current frequencies assigned to public safety departments are piecemeal, overcrowded, and insufficient to support existing and future technologies. The lack of adequate spectrum impairs communications, thereby jeopardizing

the lives of not only the first responders, but also the people they work so hard to protect.

First responders predominantly use spectrum in the 800 megahertz (MHz) band, which is currently shared with commercial wireless providers, radio and television broadcasters, and other government agencies. Even with the Commission's reallocation of spectrum in this band last year, there is little room for expansion of current first responder communications systems or deployment of completely new infrastructure.

Furthermore, the current spectrum allocated for use by public safety departments will not be adequate for use with next generation technologies. While new technologies, such as wireless broadband networks and satellite global positioning systems (GPS), enable greater communications features, they require additional bandwidth and capacity. Examples of these technologies include handheld police video gear that can capture, send, and receive images from a crime scene and car-mounted navigation units that don't just pick up traffic reports, but receive street-by-street data and calculate alternative routes for drivers.[1] The patchwork of spectrum frequencies currently in use limits the capacity of first responders to utilize these new devices and services. In addition, as new equipment incorporates additional features and capabilities, first responders will need access to more of the higher frequency bands, further dispersing public safety communications across the frequencies.

At the same time the FCC considers additional dedicated spectrum for public safety, the Commission should also consider supporting improvements in the efficiency of how technology and spectrum are utilized. Currently individual municipalities make independent decisions about communication systems, and can often duplicate technology or overbuild the infrastructure in a region crowding the available spectrum. A related issue can occur during large scale emergency situations, when communications system capacity can be overwhelmed in a region when spectrum is unavailable.

The First Response Coalition supports the development of cooperative regional planning solutions to these problems similar to the model programs developed in Virginia and the District of Columbia. These programs encourage communities to work together on regional interoperability plans, which can reduce costs, and improve spectrum efficiency and interoperability.

Virginia has partnered with SAFECOM, a federal program managed by the Department of Homeland Security to develop a locally driven strategic plan

[1] Clark, Drew. "Spectrum Wars," National Journal's Technology Daily, February 18, 2005. http://nationaljournal.com/about/njweekly/stories/2005/0218njsp.htm

for interoperability. The plan provides a framework that combined with existing interoperability efforts will dramatically improve interoperability throughout the commonwealth.

The CapWIN program is a joint partnership between the states of Maryland, Virginia, and the District of Columbia to develop an integrated transportation and public safety data and voice communication system. The purpose of CapWIN is to greatly enable and enhance communications for first responders during critical incident responses by integrating data and messaging systems in the first multi-state, inter-jurisdictional transportation and public safety integrated wireless network in the United Sates.

The FRC urges the Commission to remember the fundamental needs of first responders as it considers the complex technical and financial issues related to allocating additional spectrum for first responders. Efforts to provide first responders with the communications resources they require should not be impeded by slow decision making that has plagued spectrum policy in the past.

## 2.) THE COMMUNICATIONS INTEROPERABILITY CRISIS

Communications interoperability is the ability of first responders to seamlessly interact with other jurisdictions and other agencies. Creating interoperability between public safety communications systems of all departments at the federal, state, and local level is the largest and most immediate challenges facing first responders. Interoperability is critical to achieving effective responses to emergency situations and the current lack of interoperable communications has long been a dangerous dilemma. First responders must be able to talk to one another, and right now they can't. Currently many cities and towns possess one public safety department using new radios with advanced functionalities while its counterparts are still operating on 20-year old equipment. To help alleviate these problems, the Commission should make resolution of the interoperability crisis the first priority in its report to Congress.

As we approach the fourth anniversary of September 11th, it is critical to remember the communications interoperability lessons from that tragedy. When it became clear that the World Trade Center towers were about to collapse, the New York City police received the call to evacuate the buildings. The fire and rescue personnel did not get this order, because they operated on a different radio system than the police. As a result, while 60 police officers died in the collapse, 343 fire and rescue personnel perished.[2] At the Pentagon, where emergency personnel from 50 different public safety

[2] "On the Same Wavelength," State Government News, May 2003.

agencies in Maryland, Virginia and the District of Columbia responded, no communication was possible between fire companies of different jurisdictions, or to the Arlington County, VA fire chief who had overall command at the scene.[3]

Today, evidence suggests that there is a long way to go to achieve interoperability, even though following 9/11 the issue was discussed at length in public debate. The U.S. Conference of Mayors, in a June 2004 survey of 192 cities, found that 60% of respondents indicated that city public safety departments did not have interoperability with the state emergency operations center and 88% did not have interoperability with the Department of Homeland Security.[4]

Achieving interoperability is not an easy task. There are over 2.5 million first responders in the United States, comprising 18,000 state and local law enforcement agencies, 26,000 fire departments, and more than 6,000 rescue departments.[5] Upgrading the communications systems of all these departments and providing the first responders with the necessary equipment and training requires a dedicated effort, one that cannot be delayed.

Currently, America's first responders do not possess the necessary spectrum to support a modern system that would allow for the necessary seamless communication between departments and jurisdictions. Terrorist attacks, hazardous materials incidents, natural disasters, along with all of the other dangerous situations encountered daily by first responders often demand the involvement of public safety departments from several jurisdictions and disciplines. To provide the first responders the tools they need to respond effectively to these situations, the Commission must use this opportunity to urge Congress to address interoperability with swift action.

## 3.) ADDITIONAL SPECTRUM IS CRUCIAL TO ACHIEVING INTEROPERABILITY

First responders require additional spectrum to operationalize the cutting-edge communication systems that will enable full interoperability. These systems can transmit voice, video, and data, substantially augment current capabilities, and provide first responders with new tools that will enable them to serve communities even more efficiently.

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[3] "Rush is On to Boost Region's Response to Terror Attacks," Washington Post, September 30, 2001.

[4] The United States Conference of Mayors Interoperability Survey, June 2004. http://www.usmayors.org/72ndAnnualMeeting/interoperabilityreport_062804.pdf

[5] "When They Can't Talk Lives Are Lost," National Task Force on Interoperability, February 2003. http://www.agileprogram.org/ntfi/ntfi_brochure.pdf

One option for providing first responders with additional spectrum in the near term is for the completion of the digital television (DTV) transition by a hard deadline. Congress mandated that first responders be allocated 24 MHz of spectrum that would be returned by the broadcasters upon the completion of the DTV transition. However, it has been argued that the transition will not be finished by the previously agreed upon date of December 31, 2006. The Commission should urge Congress to accelerate the DTV transition by establishing a date certain for clearing the broadcast spectrum (700 MHz); thereby ensuring spectrum is available for use by first responders. The particular frequencies involved in the transition are of incredible value to public safety departments because they can penetrate buildings and provide more robust services, capabilities desperately sought for first responder communications. The use of revenues from the auctioning of commercial 700 MHz frequencies to help accelerate the DTV transition will ensure that the spectrum is cleared quickly and that enhanced communications capabilities will be made available to first responders as quickly as possible. Indeed, auction revenues associated with commercial 700 MHz spectrum could provide some of the funding that first responders await for the transition to more effective public safety communications.

With the added spectrum from the DTV transition, first responders can augment their services in numerous ways. For example, the public safety departments in Independence, Missouri recently upgraded their communications infrastructure using 700 MHz radio system and grant money from the Department of Homeland Security. Using the city's old 500 MHz system, the fire, police, and other municipal departments could not talk to one another. The superior design and new equipment of the 700 MHz system, at a cost of $7.3 million, will give first responders 94 percent coverage throughout their service area, up from 68 percent under the previous system. The new network employs encryption and trunking capabilities, ensuing communications transmissions are secure. The city was able to deploy this network because most of the local television stations have moved their signals out of the 700 MHz band.[6]

Commercial technology and communications providers have products and services that can be deployed to achieve interoperability for local public safety departments. Some offer Internet Protocol (IP)-based systems that replace current radio infrastructure with digital technologies, utilizing the Internet to coordinate communications traffic and allowing a variety of entities and users to access one network for communications needs. They employ wireless bridges that allow for connections to various first responder

[6] Tanner, David. "City Moving Into 700 MHz Range," *The Examiner*, April 12, 2005. http://www.examiner.net/stories/041205/new_041205006.shtml

departments and to other institutions in a city or town. Multiple wireless access points can be deployed, providing additional wireless capacity in areas where the communication traffic would be increased.

Other systems build on the traditional radio communications used by public safety departments, and "translate" currently incompatible communications. These overlays can connect all forms of radio and telephone systems, including UHF and VHF analog radios, mobile digital units, voice-over IP systems, ship-to-shore, air-ground, standard telephones, and push-to-talk cellular devices. These are only a few examples of commercial options for upgraded first responder communications.

As the Commission considers the spectrum needs of first responders, it should look at all options for allocating more frequencies for public safety use. Each recommendation made to Congress should contribute to solving the interoperability crisis.

## 4.) THE COMMISSION SHOULD URGE CONGRESS TO PROVIDE RESOURCES FOR FIRST RESPONDERS

Unfortunately, spectrum alone will not overcome the communications obstacles faced by first responders. The equipment and training needed to utilize the additional spectrum and achieve interoperability require significant financial resources. Local communities are already faced with budget shortfalls, and first responders are not receiving the funds they require. The Commission's report to Congress should also urge lawmakers to allocate sufficient funds so that first responders can obtain the state of the art communications technology that will help them make all our communities as safe as possible.

The economic reality is that achieving communications interoperability once additional spectrum is allocated for public safety will be a costly task. Estimates placed the cost of nationwide communications interoperability to be approximately $18.3 billion.[7] More than just replacing the radios used by emergency responders, there would also be required upgrades in the equipment in dispatch stations, transmitters, and relay stations. In addition to the hardware, the 2.5 million first responders would have to be trained on the new systems.[8]

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[7] "Land Mobile Radio Replacement Cost Study," PSWN, 1998.
[8] "When They Can't Talk Lives Are Lost," National Task Force on Interoperability, February 2003. http://www.agileprogram.org/ntfi/ntfi_brochure.pdf

The FRC released a report on March 24, 2005 which concluded the first responders would be underfunded by $100.2 billion by 2008.[9] If federal funding sources are scaled back, first responders may be unable to purchase the equipment that will make use of new spectrum. State and local governments have had to delay communications systems upgrades or fund them from already limited taxpayer resources. Without federal funding, communities cannot obtain interoperable communications systems for their first responders. Even though technical options exist, the technology is expensive and state and local governments cannot bear the burden alone.

The FRC believes that full funding for interoperability must be a national priority. The Commission should make this need clear in its report to Congress and urge that adequate resources for first responders be included in any future spectrum legislation.

## CONCLUSION

First responders are in urgent need of additional spectrum in order to overcome the current interoperability crisis and embrace the new technologies that will give them new capabilities. The FRC recommends that the Commission's report to Congress reflect the immediate need for additional spectrum, encourage the efficient use of spectrum and technology, call for rapid solutions to the interoperability crisis, and urge that sufficient resources are provided for first responders.

The ability to communicate in times of crisis is critical to protect the public and save lives. The interoperability problem cannot be solved overnight. But it is clear that this dilemma must be addressed immediately in a comprehensive way, so that all first responders can have access to the latest tools and technologies that will enable them to help protect our communities. The Commission can help all first responders by promoting effective spectrum policies that lead to interoperability solutions in its report to Congress.

Respectfully submitted,

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[9] "America's First Responders and the Federal Budget: A Study of Rhetoric Versus Reality," First Response Coalition, March 2005.
http://www.firstresponsecoalition.org/FRCFederal%20BudgetReport.pdf